

PROPOSED NATIONAL TSUNAMI SURVEY: 2004

Introduction

A national survey of communities living near the Pacific Coast is proposed for 2004 to study perceptions of tsunami hazards and management. The purpose of this survey is to determine coastal residents' understanding of tsunami hazards, their knowledge regarding warning systems, and their readiness and willingness to deal with events. This work will build on the current projects in Washington and Hawai'i and will extend the research to California, Oregon and Alaska

Methods

Five communities will be selected in each of the five states. It is proposed that four methods of data collection are used simultaneously:

1. Resident's survey
2. Visitor's survey
3. School survey
4. Focus groups

A postal questionnaire will be delivered to residents, and person-to-person interviews will be conducted with tourists and some residents. The survey numbers and the location of the towns will be recorded to allow the batches to be identified within a general geographical area, and thus correlate location back to levels of tsunami hazard and community characteristics.

In addition, two to three focus groups will be set up in each community. The aim of the focus groups is to explore in depth residents' attitudes and ideas of tsunami risk and preparedness. We look for assistance in organizing meetings with a range of types of groups in each area (business, environmental, seniors, community etc.). Ideally there would be around 6-15 people in each group and the meeting will last around 1 hour. The meetings will be audio-taped to allow detailed analysis of the proceedings.

Finally, in each community we will work with the local emergency management staff to set up (where possible) school surveys to measure student's awareness of tsunami hazards.

A pre-survey project meeting will be planned for December 2003 to work with local and state representative to help with community selection, questionnaire development and logistics. It is proposed to hold this immediately before or after the American Geophysical Union meeting in San Francisco (8-12 December 2003) to reduce the travel costs of the researchers (who are attending this meeting).

Linkage

The researchers have extensive involvement with other hazard related research, which will feed directly into this study. In particular the GNS hazards program, funded by the

New Zealand Foundation for Research Science and Technology, has several projects looking at the social impacts of hazardous events. In 2003 a national coastal survey was undertaken in New Zealand and this work links directly with the proposed USA study. The University of Hawaii is carrying out a study of perceptions of all natural hazards across four islands and six communities in the State.

Timeline

November 2003	Develop draft questionnaire
December 2003	Consult with partners and finalise questionnaires.
May 2003	Undertake survey in Hawaii
June 2003	Undertake surveys in California, Oregon and Washington
June/July 2004	Undertake survey in Alaska
August –October 2004	Prepare report on the findings

Cost

A full budget will be prepared following consultation with Program members. As this survey links to other funded research, significant savings are expected. A cost between \$US50-70k is envisaged, depending on the degree of consultation, number of communities and accepted timeline.

Core Research Team

David Johnston, Ph.D.

David has been employed with the Institute of Geological and Nuclear Sciences since 1993 and his research is focussed on reducing the vulnerability of society, economy and infrastructure to hazards. David is also a research associate at the University of Hawai'i. He has been involved in developing integrated risk management strategies for different hazard events, using techniques such as scenario development, mitigation planning and community education programs. Over the last five years he has undertaken research into the effectiveness of warning systems for tsunami and volcanic hazards. He is also interested in assessing social and economic impacts of natural and environmental hazard events.

Bruce Houghton, Ph.D.

Professor Bruce Houghton, is the Gordon A Macdonald Professor of Volcanology at University of Hawai'i. Bruce has worked extensively on volcanic hazards and eruption studies in New Zealand, Alaska, Hawaii, Italy, Iceland, El Salvador and South Africa. Bruce is the convener of the organizing committee for the 2003 Cities on Volcanoes meeting in Hilo. He is a Fellow of the Royal Society of New Zealand and is the former leader of the International Commission on Explosive Volcanism and Deputy Secretary-General of the International Association of Volcanology and Chemistry of the Earth's Interior.

Chris Gregg, M.Sc.

Chris is a third-year PhD candidate at the University of Hawaii. His research involves a study of natural hazards and society on the island of Hawaii with an emphasis on Kona. He has evaluated individual awareness of the threat of hazards in Kona, corresponding risk perceptions, and levels of real and perceived preparedness for hazard events. He has evaluated utilization of hazard information sources, understanding of the emergency warning system, and perceptions of emergency response to various hazards. Chris and co-authors have two papers in review describing the results of the study, a third in draft form and a fourth in a planning stage. The findings of Chris' research may be used by agencies such as Civil Defense to rectify misperceptions of hazard threats and levels of risk and to facilitate the development of realistic preparedness measures to promote resiliency in future hazard events.

Chris is also completing the much larger study of community resilience to hazard events throughout the Hawaiian Islands described above. This research seeks to identify factors that contribute to both vulnerability and resilience in Hawaii's communities. The work is funded by the Hawaii Sea Grant Program and will test an empirical model of community resilience for the islands of Hawaii, developed by Professor Douglas Paton. Since arriving at the University of Hawaii, Chris has built a complex infrastructure of networked contacts within numerous local, state, Federal and not-for-profit agencies with a presence in Hawaii. This, combined with his knowledge of natural hazards issues throughout the island of Hawaii, will prove valuable in many stages of the Hazard Mitigation Plan we are proposing to HCDA.

Douglas Paton, Ph.D., C.Psychol.

Douglas has extensive experience researching the effects of natural (e.g., earthquakes and volcanic eruptions), environmental (e.g., salinity in rural Australia), and technological (e.g., air crash) hazard consequences for response and recovery agencies and for communities. Since 1987 he has been involved in the development of disaster mitigation and response plans and he has consulted to a range of private sector and government organizations in this regard. He currently specializes in assessing community resilience and vulnerability and on designing and implementing community development and empowerment strategies to promote resilience at community levels. He teaches Masters degree courses in Emergency Management and Coping with Disasters. Douglas is currently developing a Development Center approach to providing integrated and comprehensive training for emergency managers. He is the founding editor of the Australasian Journal of Disaster and Trauma Studies and is on the Editorial Board of Disaster Prevention and Management.

Selected publications by core group members

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